



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,529	03/10/2004	Jim Bumgardner	UV-449	2528

75563 7590 12/08/2009
ROPES & GRAY LLP
PATENT DOCKETING 39/361
1211 AVENUE OF THE AMERICAS
NEW YORK, NY 10036-8704

EXAMINER

MARANDI, JAMES R

ART UNIT	PAPER NUMBER
----------	--------------

2421

MAIL DATE	DELIVERY MODE
-----------	---------------

12/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/708,529	Applicant(s) BUMGARDNER ET AL.	
	Examiner JAMES R. MARANDI	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8,9,11,12,16,17,19,20,24 and 28-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,9,11,12,16,17,19,20,24 and 28-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to applicant's amendment filed on 10/13/09. Claims 1, 3, 4, 8, 9, 11, 12, 16, 17, 19, 20, 24, and 28-36 are presently pending. Claims 2, 5-7, 10, 13-15, 18, 21-23, and 25-27 have been canceled.

1.1. In light of applicant's amendment, 35 USC § 112 rejection of claims 8, and 24 is hereby withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3, 4, 8, 9, 11, 12, 16, 17, 19, 20, 24, and 28-36 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent; or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English.

4. Claims 1, 3, 8, 9, 11, 16, 17, 19, 24, and 28 - 36 are rejected under 35 U.S.C. 102(e) as being anticipated by J. H. Gray et al., USPGPUB 2004/0163130 (hereinafter "Gray").

4.1. Regarding claim 1, Gray discloses a method for using a network of set-top

boxes (Abstract, network of Fig.1, ¶¶ [20], and [21]), comprising:

providing at least a first and a second set-top box in a network (Fig.

1; 12a and 12b), wherein each of said first and second set-top boxes

includes a respective first and second storage device capable of storing

programs (Components of a set-top box, showing storage 48, are shown in Fig.

2, and further elaborated in ¶ [23], in particular 18th-21st lines);

making said first and second storage devices available to said network (elements of Fig. 1 are networked, and share resources as in ¶ [26], in particular enabled to share storage resources as in ¶ [29]);

receiving a request to record a program (for example storing/recording the EPG example provided in ¶ [34]) **in said first set-top box** (¶ [30], 1st 4 lines);

querying said network with said first set-top box (as disclosed in ¶¶ [30] and [31] the network is queried for available resources), **to determine whether said program is stored in said second storage device included in said second set-top box** (¶ [29], 4th- 8th lines discloses determining availability of storage for storing/ retrieving content; an example is disclosed in ¶ [34], whereby the first set-top box does not have the full program/ EPG available, and secures access and uses the program/EPG of the second set-top box);

when said query indicates that said program is stored in said second storage device, accessing said program stored on said second storage device over said network with said first set-top box in response to receiving said recording request (as described for the EPG example in ¶ [34]); and

otherwise, using at least one of said first and said second storage devices in response to receiving said recording request (the EPG example of ¶ [34] also discloses that due to limited storage capacity of the first set-top box, full EPG functionality is offered by cooperation/ sharing of the two set-top

boxes, e.g. the resources of the 1st set-top box is sufficient to offer 48 hours of scheduling/ viewing). Furthermore, in ¶ [36] disclosure is made of RSG enabling each device to play content that may not be locally available, but stored elsewhere, or combination thereof).

4.1.1. Regarding claim 3, **wherein said first set-top box uses said first storage device when said first storage device is available, and attempts to use said second storage device when said first storage device is not available**, as disclosed in ¶ [34], the first set-top box uses the local storage to the extent available (48 hours worth of programming data). Once the local resource is tapped out, the first se-top box looks for resources elsewhere, e.g. second set-top box.

4.1.2. Regarding claim 8, **when said program is not stored in said second storage device** (as in ¶ [29], and example of ¶ [34], the first device communicates with other devices based on the processes outlined in Fig. 3. If resources are not available for the action requested at 61, then processes of steps 62- 66 will commence):

examine said first storage device to determine whether said first storage device has enough space available for said program (62);

record said program to said first storage device, when there is enough space available for said program (63);

examine said second storage device to determine whether said second storage device has sufficient space available, when enough space was not available on said first storage device (65, 66); and

record said program to said second storage device, when there is sufficient space available for said program on said second storage device and not on said first storage device (66). Also see ¶ [45]

4.1.3. Regarding claim 28, **further comprising recording said program to said second storage device prior to receiving said recording request in said first set-top box**, programs are stored across a network from time to time either by user request or at the direction of the network operator. Since applicant has not specified any special conditions for storage of the program, before an actual request for service is made, this claim is so broad that any network, including Gray's, reads on this claim.

4.1.4. Regarding claim 29, **wherein accessing said program stored on said second storage device comprises retrieving, over said network, said program from said second storage device, with said first set-top box, see example in ¶ [34].**

4.1.5. Regarding claim 30, **wherein accessing said program stored on said second storage device comprises displaying said program with said first set-top box, as in ¶ [34], the EPG is displayed on the viewer's TV, e.g. 24b in Fig. 1.**

4.2. Regarding claim 9, Gray discloses a network of set-top boxes (Abstract, network of Fig.1, ¶¶ [20], and [21]), comprising:

a network (network of Fig.1);

at least a first and a second set-top box connected in said network

(Fig. 1; 12a and 12b);

a first and second storage device included in respective said first and set-top boxes, wherein each of said storage devices is capable of storing programs (Components of a set-top box, showing storage 48, are shown in Fig. 2, and further elaborated in ¶ [23], in particular 18th-21st lines), and is available to said network (elements of Fig. 1 are networked, and share

recourses as in ¶ [26], in particular enabled to share storage resources as in ¶ [29]); **and**

a processor (as shown in Fig. 2, set-top box has a processor 40, and other components enabling said set-top box to perform functions as recited) **on said first set-top box, said processor being configured to:**

receive a request to record a program (for example storing/recording the EPG example provided in ¶ [34], ¶ [30], 1st 4 lines; where as shown in Fig. 3, the set-top box receives command/request at 61);

transmit a query to said network (as disclosed in ¶¶ [30] and [31] the network is queried for available resources), **to determine whether said program is stored in said second storage device included in said second set-top box** (¶ [29], 4th- 8th lines discloses determining availability of storage for storing/ retrieving content; an example is disclosed in ¶ [34], whereby the first set-top box does not have the full program/ EPG available, and secures access and uses the program/EPG of the second set-top box);

access said program stored on said second storage device over said network with said first set-top box in response to receiving said recording request when said query indicates that said program is stored in said second storage device, (as described for the EPG example in ¶ [34]); **and**

otherwise, using at least one of said first and said second storage devices in response to receiving said recording request (the EPG example of ¶ [34] also discloses that due to limited storage capacity of the first set-top box, full EPG functionality is offered by cooperation/ sharing of the two set-top boxes, e.g. the resources of the 1st set-top box is sufficient to offer 48 hours of scheduling/ viewing). Furthermore, in ¶ [36] disclosure is made of RSG enabling each device to play content that may not be locally available, but stored elsewhere, or combination thereof).

4.2.1. Regarding claim 11, **wherein said first set-top box uses said first storage device when said first storage device is available, and attempts to use said second storage device when said first storage device is not available**, as disclosed in ¶ [34], the first set-top box uses the local storage to the extent available (48 hours worth of programming data). Once the local resource is tapped out, the first se-top box looks for resources elsewhere, e.g. second set-top box.

4.2.2. Regarding claim 31, **further comprising a processor on said second set-top box** (networked devices, e.g. set-top boxes, as shown in Fig. 2, have processors 40), **configured to receive a recording request prior to receiving said recording request in said first set-top box**, as in ¶ [32], a secondary device may be designated as the control member, receiving all requests for resources, therefore the second device/ control member is configured to receive and act upon a recording request prior to receiving said recording request in said first set-top box

4.2.3. Regarding claim 32, **wherein said processor (40) is further configured to retrieve, over said network, said program from said second storage device when said query indicates that said program is stored in said second storage device**, as described in Fig. 3, steps 62- 66, once the available resource is identified, the content is stored/ retrieved from said resource. Also see ¶¶ [29], [30], [31], [34], and [45].

4.2.4. Regarding claim 33, **wherein said processor is further configured to display said program when said query indicates that said program is stored in said second storage device**, upon communication amongst resources and designation of source, e.g. 1st or 2nd set-top box, the program is displayed on the appropriate TV set (e.g. 24b)

4.3. Regarding claim 16, Gray discloses **a network of set-top boxes** (Abstract, network of Fig. 1, ¶¶ [20], and [21]), **comprising:**

means for providing at least a first and a second set-top box in a network (Fig. 1; 12a and 12b), **wherein each of said first and second set-top boxes includes a respective first and second storage device capable of storing programs** (Components of a set-top box, showing storage 48, are shown in Fig. 2, and further elaborated in ¶ [23], in particular 18th-21st lines);

means for making said first and second storage devices available to said network (elements of Fig. 1 are networked, and share resources as in ¶ [26], in particular enabled to share storage resources as in ¶ [29]);

means for receiving a request to record a program (for example storing/ recording the EPG example provided in ¶ [34]) **in said first set-top box** (¶ [30], 1st 4 lines);

means for querying said network with said first set-top box (as disclosed in ¶¶ [30] and [31] the network is queried for available resources), **to determine whether said program is stored in said second storage device included in said second set-top box** (¶ [29], 4th- 8th lines discloses determining availability of storage for storing/ retrieving content; an example is disclosed in ¶ [34], whereby the first set-top box does not have the full program/

EPG available, and secures access and uses the program/EPG of the second set-top box);

means for accessing said program stored on said second storage device over said network with said first set-top box in response to receiving said recording request (as described for the EPG example in ¶ [34]) **when said query indicates that said program is stored in said second storage device** (resource availability is checked at steps 62 and 65, and upon availability of resource, appropriate action, e.g. retrieving/ storing/ processing is taken. Also see ¶¶ [29], and [45]); **and**

otherwise, means for using at least one of said first and said second storage devices in response to receiving said recording request (the EPG example of ¶ [34] also discloses that due to limited storage capacity of the first set-top box, full EPG functionality is offered by cooperation/ sharing of the two set-top boxes, e.g. the resources of the 1st set-top box is sufficient to offer 48 hours of scheduling/ viewing). Furthermore, in ¶ [36] disclosure is made of RSG enabling each device to play content that may not be locally available, but stored elsewhere, or combination thereof).

4.4. Regarding claim 17, Gray discloses **a computer program product** (Abstract, operating network of Fig. 1, ¶¶ [20], and [21]), **comprising:**

a computer usable medium (as indicated in the components of the networked devices of Fig. 2, comprising processor for executing and storage elements 42, and 48 to run program codes stored therein) **having computer readable program code means embodies therein for causing a computer to use a network of set-top boxes, comprising:**

computer readable program code means for causing a computer to provide at least a first and a second set-top box in a network (Fig. 1; 12a and 12b), **wherein each of said first and second set-top boxes includes a respective first and second storage device capable of storing programs** (Components of a set-top box, showing storage 48, are shown in Fig. 2, and further elaborated in ¶ [23], in particular 18th-21st lines);

computer readable program code means for causing a computer to make said first and second storage devices available to said network (elements of Fig. 1 are networked, and share resources as in ¶ [26], in particular enabled to share storage resources as in ¶ [29]);

computer readable program code means for causing a computer to receive a request to record a program (for example storing/ recording the EPG example provided in ¶ [34]) **in said first set-top box** (¶ [30], 1st 4 lines);

computer readable program code means for causing a computer to query said network with said first set-top box (as disclosed in ¶¶ [30] and

[31] the network is queried for available resources), **to determine whether said program is stored in said second storage device included in said second set-top box** (¶ [29], 4th- 8th lines discloses determining availability of storage for storing/ retrieving content; an example is disclosed in ¶ [34], whereby the first set-top box does not have the full program/ EPG available, and secures access and uses the program/EPG of the second set-top box);

computer readable program code means for causing a computer to access said program stored on said second storage device over said network with said first set-top box in response to receiving said recording request (as described for the EPG example in ¶ [34]) **when said query indicates that said program is stored in said second storage device** (resource availability id checked at steps 62 and 65, and upon availability of resource, appropriate action, e.g. retrieving/ storing/ processing is taken. Also see ¶¶ [29], and [45]); **and**

otherwise, computer readable program code means for causing a computer to use at least one of said first and said second storage devices in response to receiving said recording request (the EPG example of ¶ [34] also discloses that due to limited storage capacity of the first set-top box, full EPG functionality is offered by cooperation/ sharing of the two set-top boxes, e.g. the resources of the 1st set-top box is sufficient to offer 48 hours of scheduling/ viewing). Furthermore, in ¶ [36] disclosure is made of RSG enabling

each device to play content that may not be locally available, but stored elsewhere, or combination thereof).

4.4.1. Regarding claim 19, **wherein said first set-top box uses said first storage device when said first storage device is available, and attempts to use said second storage device when said first storage device is not available**, as disclosed in ¶ [34], the first set-top box uses the local storage to the extent available (48 hours worth of programming data). Once the local resource is tapped out, the first se-top box looks for resources elsewhere, e.g. second set-top box.

4.4.2. Regarding claim 24:

computer readable program code means for causing a computer (as effectuated by components of the set-top box in Fig. 2), **when said program is not stored in said second storage device** (as in ¶ [29], and example of ¶ [34], the first device communicates with other devices based on the processes outlined in Fig. 3. If resources are not available for the action requested at 61, then processes of steps 62- 66 will commence) **to**

examine said first storage device to determine whether said first storage device has enough space available for said program (62);

computer readable program code means for causing a computer (as effectuated by components of the set-top box in Fig. 2), **when said program is not stored in said second storage device** (as in ¶ [29], and example of ¶ [34], the first device communicates with other devices based on the processes outlined in Fig. 3. If resources are not available for the action requested at 61, then processes of steps 62- 66 will commence) **to record said program to said first storage device, when there is enough space available for said program (63);**

computer readable program code means for causing a computer (as effectuated by components of the set-top box in Fig. 2), **when said program is not stored in said second storage device** (as in ¶ [29], and example of ¶ [34], the first device communicates with other devices based on the processes outlined in Fig. 3. If resources are not available for the action requested at 61, then processes of steps 62- 66 will commence) **to examine said second storage device to determine whether said second storage device has sufficient space available, when enough space was not available on said first storage device (65, 66); and**

computer readable program code means for causing a computer (as effectuated by components of the set-top box in Fig. 2),

when said program is not stored in said second storage device (as in ¶ [29], and example of ¶ [34], the first device communicates with other devices based on the processes outlined in Fig. 3. If resources are not available for the action requested at 61, then processes of steps 62- 66 will commence) **to record said program to said second storage device, when there is sufficient space available for said program on said second storage device and not on said first storage device (66).**
Also see ¶ [45]

4.4.3. Regarding claim 34, as analyzed for claim 17 computer readable program code means for **recording said program to said second storage device prior to receiving the recording request in said first set-top box**, as in ¶ [32], a secondary device may be designated as the control member, receiving all requests for resources, therefore the second device/ control member is configured to receive and act upon a recording request prior to receiving said recording request in said first set-top box

4.4.4. Regarding claim 35, as analyzed for claim 17 computer readable program code means for causing a computer **to retrieve, over said network, said program from said second storage device, with said first set-top box**, as described in Fig. 3, steps 62- 66, once the available resource is

identified, the content is stored/ retrieved from said resource. Also see ¶¶
[29], [30], [31], [34], and [45].

4.4.5. Regarding claim 36, as analyzed for claim 17 computer readable program code means for causing a computer **to display said program with the first set-top box**, upon communication amongst resources and designation of source, e.g. 1st or 2nd set-top box, the program is displayed on the appropriate TV set (e.g. 24b)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 12, and 20 are rejected under U.S.C § 103(a) as being unpatentable over Gray, in view of M.A. Dovi, USPGPUB 2002/0184451 (hereinafter "Dovi").

6.1. Regarding claim 4, Gray discloses a push/pull configuration (§ [35]) where devices determine and utilize available resources, and in § [34], 7th line from the end of paragraph, it is further disclosed that the device looks for "sufficient capacity", also see Fig. 3, step 65; however Gray is not explicit as to **said first set-top box determines whether said first storage device or said second storage device has more space available and uses the one of said first and second storage devices that has more space available.**

However, Dovi discloses a storage proxy/ registry whereby an application performs storage discovery function on available storage units in order to find enough space for storing data generated during running of the application (§§ [16] and [18]). In particular § [18], where Dovi monitors the amount of storage available, and can reallocate storage and/or reduce service levels in order to ensure that the application (video program) has enough space to be stored.

Art Unit: 2421

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gray with Dovi's invention in order to optimize storage utilization throughout the network.

6.2. Claim 12 is rejected by the same analysis as claim 4.

6.3. Claim 20 is rejected by the same analysis as claim 4.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES R. MARANDI whose telephone number is (571)270-1843. The examiner can normally be reached on 8:00 AM- 5:00 PM M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2421

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James R. Marandi/
Examiner, Art Unit 2421

/Hunter B. Lonsberry/
Primary Examiner, Art Unit 2421